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Terada et al.

[11] **Patent Number:** **6,021,303**[45] **Date of Patent:** **Feb. 1, 2000**[54] **IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE USING THE SAME**

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[51] Int. Cl.⁷ **G03G 15/20**[52] U.S. Cl. **399/328; 399/329; 399/330; 399/335**[58] Field of Search **399/320, 328, 399/329, 330, 333, 335, 338**[56] **References Cited****U.S. PATENT DOCUMENTS**

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An image heating device comprises a cylindrical heating roller with a Curie temperature of 210° C., a magnetization coil for magnetizing the heating roller with an alternating magnetic field, which is arranged inside the heating roller, and a nip portion for heating a recording material that carries a toner image with heat from the heating roller, while the recording material is being conveyed along said nip portion. The ratio between the amount of heat generated in said heat-generating member at Curie temperature or higher to the amount of heat generated at room temperature in said heat-generating member is not more than ½. With this configuration, the heating roller can regulate its own temperature to stabilize at a temperature that is suitable for fixing, and the problems of partial overheating or underheating, unstable heat generation, or damage of the device can be eliminated.

34 Claims, 10 Drawing Sheets